

## Workshop summary: What to eat: A multi-discipline view of meals

### Introduction

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Much human eating occurs during meals, occasions when a substantial amount of food is eaten in a short time. In many cultures there is a pattern of three daily named meals, supplemented by other eating occasions that may or may not be named and/or considered to be meals. However, most research on human eating, whether academic or applied, has focused on individual foods rather than on the combinations of foods that comprise most meals. As a result, although laypeople report confidently and knowledgeably whether they have eaten a meal on a particular occasion and, if so, which meal they have eaten, scientists know surprisingly little about meals.

We think it is critical to meals research to understand how meals are conceptualized from a number of contrasting perspectives: those of meal-takers and meal providers, members of different cultures, individuals who vary in age, gender, and social class; and those living at various times in history. Several important research questions arise in relation to meals, including: (a) what characteristics of an eating occasion cause individuals to label it as a meal? (b) What are the consequences of labeling an eating occasion as a meal or not? (c) What is the social significance of meals in people's lives? (d) How do changes in meal patterns reflect and produce changes in other aspects of individuals' lives? (e) How can we unify the various approaches for studying meals so as to be able to generalize findings across studies of meals and across cultures? The answers to these questions have implications for understanding food choice and food intake regulation. They also have relevance for the study of social roles and social relations.

The following papers on meals attempt to begin to answer these questions. Herbert Meiselman, who edited one of the few books on meals, discusses problems in

defining meals, suggesting that, depending on one's discipline, the perspective, and hence the definition, of meals varies enormously. Patricia Pliner and colleagues report the situational factors that lead laypeople to label a particular eating occasion as a meal or not. Jeanne Goldberg and Sara Folta describe how meals are defined from the perspective of dietitians and nutritionists, who are concerned with the contribution of meals and snacks to total energy intake, the nutrient profiles of different meals during the day, and nutritional adequacy resulting from the meal intake variability. John Edwards discusses meals from a foodservice perspective, describing the kinds of menus offered in different venues, and the ever-present tension between the aesthetic, health, and economic goals of foodservice operators. David Marshall describes changes over time in how British meals are patterned throughout the day, and differences in contemporary meals across groups defined in terms of socioeconomic and demographic variables. Lastly, Rick Bell and Patricia Pliner discuss the phenomenon of eating meals alone; comparing the perception of meals taken by solo eaters who choose to eat alone with those who do not eat alone by choice. Also described are reasons for eating alone in various situations.

### Introduction to meals

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One of the main problems in discussing meals or researching meals is agreeing on a definition of what constitutes a meal. The dictionary definition of 'meal' refers to two separate entities: the regular occasions of eating (such as breakfast, lunch, dinner) and what is eaten. In their review of the psychological aspects of meals in the book on Dimensions of the Meal (Meiselman, 2000), Pliner and Rozin concluded that the meal "is the basic or privileged unit... Both our day and our thinking are organized in terms of meals." This puts meals in a very special category of being a fundamental unit of eating, at least psychologically speaking. Some argue that the definition and composition of meals is

socially loaded, but the meal occasion likely has importance in most, if not all, cultures.

If one skims the Chapters in Dimensions of the Meal, it is clear that what constitutes a meal varies with the perspective of the observer. Sensory researchers see a meal as a combination of sensory experiences; nutritionists see meals as energy and nutrient intake, and are reluctant to even use the word “meal” because it is psychologically and sociologically loaded. Some focus on the fact that humans are not grazing animals—we do most of our eating in short time periods, called meals. But the sociologists focus on the social nature of eating: the food and resulting sensory experiences are relatively unimportant; what is important are the social rules and social interaction(s) at meals. Food service professionals focus on meals as menus, combinations of food in which order and presentation are important. One author, in frustration, said, “you know a meal when you see one”!

Others have used specific definitions of the meal for meal studies. Oltersdorf, Schlettwein-Gsell, and Winkler (1999) summarized some of the criteria used. Time of consumption focuses on when meals are usually consumed, namely breakfast, midday and evening; energy content requires some minimum intake; social interaction requires the presence of other people, relegating single eaters to snacks or other non-meal phenomena. Because meals usually contain more than one food, and snacks might contain only one food, some authors have focused on the number of foods. Still others have used composite measures, for example energy content plus time interval since last meal.

Meals would not be so difficult to define if they remained stable over relatively long periods of time. In fact, the meal as we know it today, is a fairly recent development in the history of man’s eating. Today’s pattern of eating is pretty much a 20th century phenomenon—although most people probably assume that we have always eaten the way we do, with three meals a day including one hot meal. At the beginning of the 19th century and before, people at formal meals dined in the French manner, which meant that all of the food was placed on the table, and you ate what was in reach. The Russian Court introduced a radical development in which waiters served food in a series of courses. In most pre-industrial countries people ate (and continue to eat) as many as five times per day. Three hot meals were the norm well into the 20th century in western countries. Restaurants, as we know them, were not introduced until the 18th century, most likely in France. Plated meals were popularized in the early 20th century in America, and fast food and prepared foods followed World War II. Meals have continued to change, and will continue to change, and one must assume, based on this history, that we will be eating differently in 50 years and very differently in 100 years.

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### A layperson’s perspective on meals

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Definitions of meals fall into two categories: (a) those that characterize meals as objects—static, structured entities, and (b) those that characterize meals as events—dynamic, social occurrences which create meaning for the participants or which reflect and/or communicate social realities (Lalonde, 1992). Here we report studies approaching meals from both perspectives.

In the first, we extended work of Douglas (1975) and Murcott (1982), who have described characteristics of occasions that lead to their definition as meals (rather than non-meal eating occasions). Participants (soldiers and college students) rated the likelihood that each of 100 brief scenarios described a snack, breakfast, lunch, dinner, or some other eating occasion. Each scenario began “you are eating” and was followed by such information as “at your desk,” “cooked vegetables,” or “without utensils.” Consistent with some of Douglas’ and Murcott’s observationally based findings, meals and non-meal eating occasions were distinguished by what foods were served, whether the food was eaten hot or cold and with or without utensils, whether or not there was a restriction on alternate activities, and which other people were present. In addition, our participants made distinctions between meals and non-meals based on amount and variety of food eaten, time of day, and expectations regarding the likelihood that they would feel satiated and would eat again in the near future.

The second study approached meals as events. In that context, a meal can be construed as a “purposive action, one which follows a script so as to achieve an intended effect” (Visser, 1986). In such a meal script or schema, one of the intended effects of a meal is to satisfy one’s hunger, and if the meal accomplishes its aim, one expects not to be hungry and not to eat again for some time. This idea is confirmed by the data from the previous study and leads to the hypothesis that people should be able to make predictions about when and how much someone else is likely to eat following a meal or a

snack. To test this hypothesis, we prepared two versions of a videotape; in both a female target was shown eating soup, chicken, cole slaw, a cookie, and an apple. In one version, the food was heated, served at a table on dishes with utensils, and eaten in an appetizer, main course, dessert order; in the other, the food was eaten cold, out of refrigerator containers without utensils in a non-standard order by the target, who stood and studied as she ate. In the context of a plausible cover story, participants' task was to predict whether the target was likely to be hungry again in the next two hours, whether she was likely to eat, and if so, how much. Results clearly indicated that when the target was seen eating in a context that incorporated meal-like features, she was expected to be less hungry and eat less in the near future than when she ate exactly the same food in a context that did not incorporate meal features.

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## How do dietitians define a meal?

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In order to address the question of how dietitians define meals, it is first necessary to have a working definition of the term “dietitian.” According to the US Bureau of Labor Statistics (2002), dietitians are professionals who “plan food and nutrition programs, and supervise preparation and serving of meals. They help prevent and treat illnesses by promoting healthy eating habits and suggesting diet modifications.” Three key concepts in this definition are that dietitians focus on *meals*, that they are interested in the role of food in health promotion, and in its role in the treatment of disease.

Dietetics grew out of a movement in the 1890s to have women specially trained in foods and food preparation preside over the special diet kitchen. In essence, the first dietitians were nurses who were taught how to prepare foods for the sick. Because of this, it seems reasonable to expect that the dietitian's approach to defining meals would be prescriptive. There is evidence for this in the way that dietitians have described meals from that time on. Sarah Tyson Rorer (1917), often credited with being the first dietitian, described how meals should be broken

down: “Eat the correct number of calories every 24 h; 700 or 800 for breakfast, about the same at noon, and the remains of the 3000, the allowance for the 24 h for dinner.” Another prominent early nutritionist, Mary Swartz Rose (1917), said in her book *Feeding the Family* that “To see the children rosy, the family accounts free from doctor's bills, and an atmosphere of serenity in the home are surely compensation for the time and thought given to family meals.” As with Sarah Tyson Rorer, meals included notions of the individual (wife) as the provider; family values; and preventive medicine. Her definition of meals also included the concepts of caloric density, adequacy of nutrients, balance of combinations, balance of colors and textures, differences for the ages and stages of life, and above all, a need for planning. Both women's books include detailed menus. So do the Recommended Dietary Allowances in 1948 (Food & Nutrition Board, 1948); a classic nutrition textbook from 1958 (Cooper et al., 1958); and a current nutrition textbook (Wardlaw, 1999), which gives an example of a menu that will provide the recommended number of Food Guide Pyramid servings. Government feeding programs are also prescriptive in how they define a meal. For example, in order to qualify as a meal for reimbursement, school lunch must “provide one-third of the Recommended Dietary Allowances of protein, vitamin A, vitamin C, iron, calcium, and calories” (USDA, 2003). As scientific evidence accumulates, the concept of a “balanced” meal is based more than ever on preventive medicine. It is of particular interest that the earliest fundamental elements of a meal as defined by dietitians at the beginning of the 20th century remain the cornerstone of modern thought about optimal nutrition as defined by the profession.

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## A food service perspective of the meal

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When examining the meal from a food service perspective, it is important to define the term 'food service'. For this paper, food service is the *serviced provision of food and beverages for consumption both away from and at home*.

People eat out either for pleasure (a social activity or part of a social occasion), for business reasons (part of a normal working day or when entertaining business contacts), or through 'necessity'. In this latter situation, the meal provides sustenance; it is a refuelling process and individuals might not choose to be in that situation.

The food service sector could be classified as follows: the Profit Sector—where profit is the primary purpose of the business (e.g., fast food restaurants, fine dining restaurants); the Not for Profit Sector—where establishments work on a tight budget, and the provision of meals is not the primary objectives of the business (e.g., eating at work, hospitals).

From a food service perspective, it could be argued that the meal is synonymous with the term 'menu'. These could be classified as follows: (1) *Non-selective or fixed menu*—where there is little or no choice (e.g., banquets, meals on wheels, airlines and army rations). The important food service question here is how can a meal be designed with practically no choice that satisfies all?; or (2) *Selective menu*—where there is a limited choice. These are either: (a) *Table d'hôte menu*—(e.g., popular restaurants, hospitals) where choice is limited for each course, but there is a fixed meal price. The question here is not only what dishes to provide but also how many choices to offer—too many, and costs rise, too few and there could be dissatisfied customers; or (b) *À la carte*—(e.g., fine dining restaurants) where wide choice is available.

Designing the menu is one of the most difficult food service activities. The menu is often the first opportunity that customers have of seeing what is being offered. In building a menu, food service operators are faced with a number of dilemmas. The meal provided has to be hygienic and safe, but who is responsible for healthy choices currently lies with customers. Food service operators are in business to make a profit. They only provide options they believe will sell. However, with recent litigation threats, this might be changing. Many higher end food service operators are concerned with Gastronomy—offering a fine dining experience. But in the end, the profit and not for profit operators are concerned with what makes good business sense.

When considering basic menu planning, availability and seasonality of food need to be considered, as does the balance of the following sensory characteristics within the meal: sight, odor, texture, temperature, taste and flavor.

Does a better understanding of the meal really matter to food service operators? Food service operators are in business to make a profit; they supply what consumers want. However, a better understanding of the meal

could help predict what type of menu and dishes might be selected, could indicate the number and range of choices to offer, and could assist in the provision of a nutritious and balanced diet.

### **British meals: Eating at home**

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Despite their ubiquity, there is a surprising lack of public information about British meals. What we do have, however, are some very good qualitative studies and conceptual work on meals. Much of this has focused on eating patterns and the distribution of food events throughout the year, week and day. British market research data for example, has revealed a pattern of two to three meals per day and some expectations about what is considered appropriate across the weekly domestic menu. However the question "what is a (*British*) meal?" remains open to debate. Suffice to say it is more than a sensory experience. Meals reflect social and cultural ideas about eating that involve the selection of food and that approve certain combinations, while at the same time satisfying individual taste preferences within structural constraints. Moreover, how food is prepared and cooked is often indicative of the occasion; consider the significance of the British Sunday roast dinner. Meals mark the passage of time and distinguish morning from evening and mid-week from the weekend. Where the meal is eaten represents a further constraint on choice but perhaps, most significantly, what is served depends on who is present (or not in the case of single diners) and the relationship between the diners.

This is aptly illustrated by Douglas's (1972) study of British working class households in which she saw the meal as a highly structured event that observed rules regarding when, where and in what order food was served. Much has been made of the 'proper (British) meal' exemplified by the 'hot cooked dinner' in what Murcott (1982) regarded as a metaphor for British family life. More recently research among young Scottish couples ( $n = 22$ ) revealed that the proper meal remains important but acts more as a normative guide rather than being fixed and prescriptive in terms of what is served. Food diary records from the study showed a wide range of dishes served over a seven day period ranging from 'traditional meat and potatoes' through to pasta dishes, rice dishes, pizza and a range of 'ethnic' dishes (Marshall & Anderson, 2002). While this cannot claim to be representative of the British population it highlights the continuing significance of eating meals and the need to consider how this has changed.

Speculating on British meals, there appears to be a range of meal types from the festive meal through special

meals, main meals, light meals and snacks. Each differs in their structure and format ranging from the elaborate and highly ritualised through to the simple and informal, each reflecting the social nature of the eating (Marshall, 2000, 2004). More research is required into British meal patterns, structures and formats to help catalogue, describe and explain the relationship between eating occasions and food choice. Where for example are new dishes and new food products being accommodated within the existing meal pattern in British households? Some of these answers may lie in the wealth of untapped data on meals, for example in market research and nutritional studies where the focus has been primarily on individual food products/brands or nutrients as opposed to the meal occasions in which they are served.

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## Eating alone: Defining the solo eater and her meal

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*"Oh, the pleasure of eating my dinner alone!"*  
Charles Lamb

*"He who eats alone chokes alone."* – Arab Proverb,  
H. L. Mencken, *Dictionary of Quotations* (1942)

Defining a meal based on its food components is difficult; adding to the difficulty is the question of whether someone eating alone should be considered "eating a meal" or "merely eating." Prior research suggests that eating alone is not a "proper" meal (Douglas, 1975; Murcott, 1982), not a 'real' meal" (Sobal, 2000), not desired, and in public, it is an anomaly. Experts suggest that with whom one eats may be a requirement as important as what food one eats for defining an eating experience as a meal. We suggest that the definition of a meal should come, in part, from the person having the eating experience. An expert telling a solo eater that

their five-course dinner is not a meal is tantamount to telling that person whether or not they are in love. Definition is in the eye of the beholder—the eater.

We sampled 170 subjects (ages 19–70) for their frequency of and reasons for eating alone at home and at restaurants. We also examined their penchant for solitude by creating the Solitary Activity Domains (SAD) scale. Lastly, we examined solo eaters' definitions of what elements comprise a "dinner meal."

Subjects were more tolerant of eating alone at home compared with at a restaurant. The most common reasons for wanting to eat at home alone were: take as long as wanted; have whatever wanted, watch TV while eating, no worries about what to prepare. The common reasons for not wanting to eat alone at a restaurant were: boredom, loneliness, and no one to share the experience.

The SAD Scale consists of 34 activities: five relate to eating. Subjects rated their preference for performing each activity alone or with others. The food activity most preferred to do alone was cooking (33% of subjects), followed by food shopping (21%), eating at home (14%), eating at fast food restaurants (9%), and eating at a sit down restaurant (3%). We defined a Self-Selected Solo (SSS) Eater as one who preferred to be alone for at least two of the five eating activities. In this sample, 20% were SSS Eaters. We compared these to Circumstantial Solo (CS) Eaters, defined as people who reported eating more meals alone by circumstance versus by choice. In a typical week, SSS Eaters eat more breakfasts alone (4.6 vs. 3.8), more lunches alone (3.4 vs. 2.6) and more dinners alone (2.1 vs. 1.0), when compared with CS Eaters.

We then asked SSS Eaters, CS Eaters and Social Eaters (those who reported eating more meals with other people by choice) to define certain elements of an eating experience as being a "dinner meal." Compared with CS Eaters and Social Eaters, Self-Selected Solo Eaters perceived an eating situation as dinner even when eating alone, eating fewer numbers of foods, eating a lower volume of food, or eating for a shorter period of time. In conclusion, we find that consumers *choosing* to eat meals alone do define what they are eating as a meal. Experts should be damned to "merely eat" alone!

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